ABSTRACT:

A special-purpose file system is provided which includes a combination of
services and features which improve the performance of applications employing caches, such

5   as caching web proxies. This file system also provides a file system cache which can be used
as a general high-performance file system cache for file systems which need a cache. The
services and features include collocating files together on a disk; keeping file meta-data in
memory; compressing file names to hash values for reference; using a flat naming scheme for
files; providing background daemons that pack files into clusters and clean disk and main

10   memory space; and implementing a user-level library. The file system reduces access to
related disk files, eliminates disk operations that are needed to maintain directory and meta-
data information, and avoids multiple buffering of file data, and saves and efficiently manages
disk and main memory space.